

BTV 103

Wafer and fully lugged version – PN 16



Butterfly valve for heating and cooling systems. Available in pressure class PN 16.

TA-SC

Distributed by TA Hydraulics



Technical description

Applications:

Heating and cooling systems.

Function:

Shut-off

Dimensions:

DN 50-600

Pressure class:

PN 16

Temperature:

Max. working temperature: 120°C

Min. working temperature: -10°C

Material:

Body: Ductile iron EN-GJS-500-7 (EN 1563)

Shaft: Stainless steel X20Cr13 +A (EN 10088-2, BS 970 ~420S37, AISI 420)

Disc: Stainless steel X5CrNi18-10 +AT (EN 10088-2, BS 970 304S15, A351 CF8)

Bushing: PTFE

Liner: EPDM

O-rings: EPDM

Lever: DN 50-200 pressed steel trigger lever, DN 50-600 cast iron gear operator.

Marking:

TA-SC, CE, DN and PN.

Surface treatment:

Coated in Pantone 424 dark grey paint.

Lever and gear operator: FBE (fusion bonded epoxy) coated, black.

Valve standard:

According to EN 593 (BS 5155)

Flanges:

According to EN 1092-2.

Top flange: According to ISO 5211/1.

Approvals:

WRAS

Installation

The distance between the flanges must be taken in consideration before installation of the valve. Place the valve in the centre and open the valve before mounting of the bolts. Tighten the bolts in the right order when assembly the valve between the flanges to keep an even pressure against the valve.

NOTE!

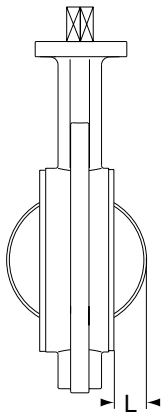
- The valve must be open at installation.
- Do not weld a flange after the valve is installed. The heat can damage the sealings of the valve.
- Blind flanges must be used if the valve is installed in the end of a piping system.

Wafer version

DN	No of bolt holes
50	4
65	4
80	4
100	4
125	4
150	4
200	4
250	4
300	4
350	4
400	4
450	4
500	4
600	4

Fully lugged version

DN	No of bolt holes
50	4 x M16
65	4 x M16
80	8 x M16
100	8 x M16
125	8 x M16
150	8 x M20
200	12 x M20
250	12 x M24
300	12 x M24
350	16 x M24
400	16 x M27
450	20 x M27
500	20 x M30
600	20 x M33



DN	L*
50	7
65	14
80	19
100	25
125	36
150	48
200	71
250	92
300	111
350	129
400	153
450	167
500	187
600	223

*) Excess disc length when fully open.

Tightening torque

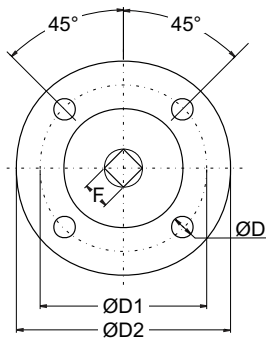
The test was performed under normal working conditions.

Media: Water at normal room temperature. Under certain working conditions it is necessary to increase the tightening torque with 30%.

Tightening torque during operation

DN	Size [inch]	Nm.	Max working pressure [bar]
50	2	30	16
65	2 1/2	48	16
80	3	60	16
100	4	60	16
125	5	90	16
150	6	110	16
200	8	190	16
250	10	260	16
300	12	460	16
350	14	880	16
400	16	1325	16
450	18	1765	16
500	20	2250	16
600	24	3180	16

Top flange connection



Flange according to ISO 5211/1

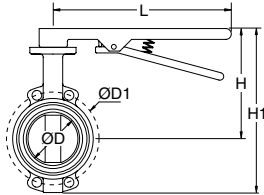
DN	F	D	D1	D2	Flange
50	11	9	70	90	F07
65	11	9	70	90	F07
80	11	9	70	90	F07
100	14	9	70	90	F07
125	14	9	70	90	F07
150	17	9	70	90	F07
200	17	11	102	125	F10
250	22	11	102	125	F10
300	22	11	102	125	F10
350	22	14	125	150	F12
400	27	18	140	175	F14
450	27	18	140	175	F14
500	$\varnothing 48$	22	165	210	F16
600	$\varnothing 48$	22	165	210	F16

Articles

Wafer version

BTV 103WL

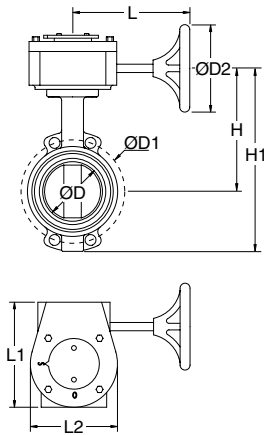
With lever



Article No	DN	D	D1	L	H	H1	Face to face length	Kvs	Kg
77 103-050	50	57	125	260	191	241	43	155	4,5
77 103-065	65	72	145	260	205	296	45	230	5,4
77 103-080	80	83	160	260	211	306	46	380	5,6
77 103-090	100	102	180	260	230	345	52	515	7,3
77 103-091	125	128	210	260	245	379	56	900	10
77 103-092	150	151	240	260	255	393	57	1920	12
77 103-093	200	201	295	325	271	445	60	3000	14

BTV 103WG

With gear operator

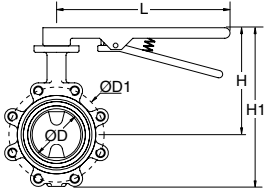


Article No	DN	D	D1	D2	L	L1	L2	H	H1	Face to face length	Kvs	Kg
77 103-250	50	57	125	195	160	130	108	194	274	43	155	7,9
77 103-265	65	72	145	195	160	130	108	208	299	45	230	8,8
77 103-280	80	83	160	195	160	130	108	214	309	46	380	9,0
77 103-290	100	102	180	195	160	130	108	233	348	52	515	11
77 103-291	125	128	210	195	160	130	108	248	387	56	900	13
77 103-292	150	151	240	195	160	130	108	258	396	57	1920	16
77 103-293	200	201	295	297	238	177	153	278	452	60	3000	23
77 103-294	250	251	355	297	238	177	153	333	531	69	3940	30
77 103-295	300	301	410	297	226	198	161	392	626	80	6750	43
77 103-296	350	336	470	297	226	198	161	424	704	78	8120	67
77 103-297	400	394	525	388	266	281	252	456	766	88	11450	110
77 103-298	450	444	585	388	266	281	252	478	818	109	11700	131
77 103-299	500	501	650	388	241	303	264	536	924	127	18200	157
77 103-201	600	601	770	388	241	303	264	618	1068	154	25640	222

Fully lugged version

BTV 103FL

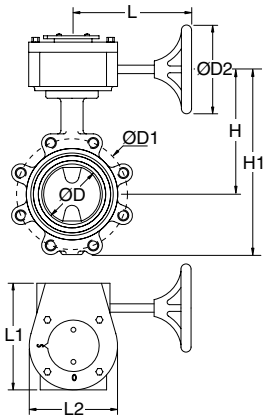
With lever



Article No	DN	D	D1	L	H	H1	Face to face length	Kvs	Kg
77 103-150	50	57	125	260	170	238	43	155	4,6
77 103-165	65	72	145	260	181	258	45	230	5,6
77 103-180	80	83	160	260	190	275	46	380	6,2
77 103-190	100	102	180	260	211	310	52	515	9,0
77 103-191	125	128	210	260	221	341	56	900	12
77 103-192	150	151	240	260	233	364	57	1920	13
77 103-193	200	201	295	325	271	431	60	3000	24

BTV 103FG

With gear operator



Article No	DN	D	D1	D2	L	L1	L2	H	H1	Face to face length	Kvs	Kg
77 103-350	50	57	125	195	160	130	108	173	241	43	155	8,0
77 103-365	65	72	145	195	160	130	108	184	260	45	230	9,0
77 103-380	80	83	160	195	160	130	108	193	278	46	380	9,3
77 103-390	100	102	180	195	160	130	108	214	314	52	515	13
77 103-391	125	128	210	195	160	130	108	224	344	56	900	15
77 103-392	150	151	240	195	160	130	108	236	368	57	1920	17
77 103-393	200	201	295	297	238	177	153	278	438	60	3000	33
77 103-394	250	251	355	297	238	177	153	311	511	69	3940	36
77 103-395	300	301	410	297	226	198	161	371	601	80	6750	51
77 103-396	350	336	470	297	226	198	161	424	704	78	8120	81
77 103-397	400	394	525	388	266	281	252	456	766	88	11450	120
77 103-398	450	444	585	388	266	281	252	478	818	109	11700	145
77 103-399	500	501	650	388	241	303	264	536	924	127	18200	180
77 103-301	600	601	770	388	241	303	264	618	1068	154	25640	248

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